

Remarks

The Office Action dated May 10, 2004 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-13, and 25-35 are pending in this application. Claims 1-11 and 25-33 stand rejected. Claims 12-24 and 34-35 are withdrawn from consideration. Claims 14-24 have been canceled.

Applicants respectfully submit that contrary to the suggestion at page 2 of the Office Action, the recitation "said topping heater capable of raising the temperature of said feed water so that said feed water in said high temperature water cracking system is at least about 850°C" is a structural imitation and not an intended use of the system. Applicants submit that the topping heater has to be structurally sized to raise the temperature of the feed water to 850°C. Applicants further submit that there is no teaching in Kapich that the heat exchanger taught in his system is capable of raising the temperature of the feed water to 850°C. Rather Kapich teaches a temperature of 760°C.

The rejection of Claims 1-11 and 25-33 under 35 U.S.C. § 112, first paragraph, is respectfully traversed.

Claims 1 and 25 have been amended to recite "said high temperature water cracking system being separate from any secondary heat loop of said liquid metal nuclear reactor". Applicants submit that the recitation does not contain new subject matter. Particularly, originally filed Claim 1 recited "A system for generating hydrogen comprising: . . . a liquid metal reactor having a non-radioactive secondary heat loop". Applicants respectfully submit that the term "comprising" is open ended and as such the liquid metal reactor is not limited to only one

secondary heat loop. Other secondary heat loops can be present because of the open-ended structure of Claim 1. Therefore, any implication of more than one secondary heat loop has been disclosed in the originally filed application.

Further, Applicants submit that multiple secondary heat loops are known in the art, see U.S. Patent No. 4,413,348 to Kapich, and one skilled in the art would know how to make and use a liquid metal reactor having multiple secondary heat loops. The Federal Circuit has opined in *Verve LLC v. Crane Cams, Inc.*, 65 USPQ 2d 1051, 1053-1054 (Fed. Cir. 2002), that "[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field." Accordingly, Applicants submit that Claims 1-11 and 25-33 meet the requirements of Section 112, first paragraph.

For the reasons set forth above, Applicants respectfully request that the Section 112, first paragraph, rejection of Claims 1-11 and 25-33 be withdrawn.

The rejection of Claims 1-11 and 25-33 under 35 U.S.C. § second paragraph, is respectfully traversed.

At least for the reasons set forth above, Applicants submit that Claims 1-11 and 25-33 are definite and particularly point out and distinctly claim the subject matter which Applicants regard as their invention.

For the reasons set forth above, Applicants respectfully request that the Section 112, second paragraph, rejection of Claims 1-11 and 25-33 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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